Rabies in Sri Lanka
current situation and the way forward

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Introduction

- **Sri Lanka** - an island with a land extent - 65,524 Km²
  - Rabies is endemic
  - Dog is the main reservoir
  - Cats 2\textsuperscript{nd} commonest

- Dog to man ratio around 1:8
- Significant stray dog population
- Vaccination of domestic dogs not mandated by law
- Improperly / unvaccinated domestic dog is our main problem
Human rabies

• Human rabies deaths occur every year
• Mainly transmitted by dogs (over 98%)
• Numbers have reduced rapidly during the last 3 decades
• Fluctuating around 20 per year for past 3-4 years
• Children are less affected (<20%)
### Human rabies deaths from 2015 - to date

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<tr>
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</thead>
<tbody>
<tr>
<td>No of Lab confirmed /total received</td>
<td>24/26</td>
<td>20/25</td>
<td>23/34</td>
<td>6/8</td>
</tr>
<tr>
<td>No of children affected</td>
<td>3/24</td>
<td>5/20</td>
<td>3/23</td>
<td>2/6</td>
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<tr>
<td>Male : Female ratio</td>
<td>19 : 5</td>
<td>13 : 7</td>
<td>18 : 5</td>
<td>4 : 2</td>
</tr>
<tr>
<td>Deaths due to dog bites</td>
<td>18/24</td>
<td>17/20</td>
<td>18/23</td>
<td>5/6</td>
</tr>
<tr>
<td>Deaths due to puppy bites</td>
<td>5/24</td>
<td>7/20</td>
<td>3/23</td>
<td>1/6</td>
</tr>
<tr>
<td>PET not taken</td>
<td>22/24</td>
<td>18/20</td>
<td>20/23</td>
<td>4/6</td>
</tr>
</tbody>
</table>
Changing pattern of animal samples received

2006
- Dog: 90%
- Cat: 8%
- Squirrel: 2%
- Wild Animal: 2%

2010
- Dog: 87%
- Cat: 9%
- Squirrel: 0.14%
- Wild Animal: 3.4%

2015
- Dog: 78%
- Cat: 17%
- Squirrel: 2%
- Wild Animal: 3.3%
Laboratory diagnostic services

- National/Reference laboratory at MRI
- Two peripheral laboratories
- Over the last 10 years,
  
  Average annual samples: 1500 (1350-1800)
  Average positivity rate 45% (40-60%)

Tests performed

- Direct smear for Negri bodies for animal samples
- Direct fluorescent antibody test (DFAT) - Confirmatory test
- Immuno-chromatography test (ICT)
- Rabies molecular diagnosis by - real time RT-PCR
- Mouse inoculation test (MIT)
Prevention & control of rabies

• Prevention/control activities for both humans and animals were handled by the Ministry of Health until recently.

• Now prevention/control activities for animal rabies is the responsibility of the Department of AP&H under the Ministry of Agriculture and Rural Development.

• Presently we are in a transition phase.
Our Goal

Elimination of human rabies by 2020
Preventive Strategies

• Minimizing risk of human exposure by controlling dog rabies

• Pre and post-exposure anti rabies prophylaxis for humans

• Promoting confirmation of rabies by laboratory diagnosis
Controlling dog rabies...

- Promoting responsible pet ownership
- Public awareness campaigns on dog vaccination
- Free dog vaccination campaigns organized by Public Health Inspectors (Rabies) in collaboration with the MOH and Regional Epidemiologists
- Free dog vaccination clinics by government veterinary clinics
Controlling dog rabies cont..

• Community/stray dog vaccination programmes — using auto plunger

• Support extended by several NGOs for dog vaccination and sterilization

• More enthusiasm towards female dog sterilization

• Better environment control — proper garbage removal

• ‘No kill policy’ from 2007 with dog vaccination and sterilization
Medical management

• Rabies PET given free of charge in most tertiary care government hospitals - island wide

• Over 95% of PET is by ID Anti Rabies Vaccine (ARV) schedules ± anti rabies serum (ARS) according to protocol

• Rabies information centre at MRI

• Regular training workshops for medical officers and nurses working in Rabies treatment units
Challenges

• Vaccination targets to control canine rabies is yet to be achieved (coverage in most areas only around 40 -50%)

• Human rabies – still occur in significant numbers
  – Most affected group is the **uneducated adult males**
    (Reaching population on move- masons, drivers, vendors, labourers .... is very difficult)

• Huge expenditure on post exposure prophylaxis (10 -15% of the drug budget)

• Rational use of PET according to guideline – Proper treatment of patients on time, preventing unnecessary vaccinations and wastage
Thank You!